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EXAMINER	
LELE, TANMAY S	

ART UNIT	PAPER NUMBER
2684	7

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/821,921	WIEKERT ET AL.	
	Examiner	Art Unit	
	Tanmay S Lele	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12 February 2004 have been fully considered but they are not persuasive.

2. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding claims 1, 2 – 6 and 11, Applicant attempts to overcome the rejection by stating, "Figure 1 of Ritter shows that each base station BS serves a different cell 14, 16, and 18," and further that "Thus, Ritter does not disclose two base stations coupled to serve the same three sectors." Examiner respectfully disagrees that the structure sited by Ritter, when viewed with the prior art (and subsequently Fujii, as will be discussed below) do not teach the claimed as broadly interpreted. As stated in the previous Office Action (paper number 4, pages 5 –6), Applicant's admitted prior art teaches of a base station structure, specifically that "a 3x7 radio base station... serves three cells, or sectors, with seven radios per sector," (paragraph 0005). Note that Applicant further defines a radio base station in the prior art as "self contained enclosures that house transmitters, receivers, and other wireless communication equipment," (paragraph 0004). Also note that Ritter teaches in conjunction with Figure 1, of communications units 1 and 2 that wirelessly communicate with a mobile (column 5, lines 40 –52), and hence meet Applicant's definition of the radio base station as stated above (from Applicant's admitted prior art) as they house transmitters, receivers, and other wireless communications equipment to

thereby effectuate communications with the mobile unit. Further note that communications units 1 and 2 can operate simultaneously (column 6, lines 41 –46), share a common antenna (Figure 1 and column 43 –47; which is configured in a three sector configuration as per Figures 1 – 3), and are coupled to one another (for example Figure 1 and column 5, lines 38 –40). Thus, Ritter's radio communications units 1 and 2 (which again meet Applicant's radio base station definition) were combined with Applicant's admitted 3x7 radio base station structure (with each communication unit being one 3x7 radio base station structure; further note again Ritter commonly teaches of a three sectored cell as stated above) to teach the claimed as recited.

Continuing, Applicant states, "Thus, Fujii does not teach coupling two 3x7 radio base stations to create a 3x15 radio base station." As stated above, the combination of Applicant's prior art in view of Ritter teach of a combined base station (Figure 1 and column 5,lines 38 –52; where BS1 – BS3 are referred to as base stations serving a cell) that serves a three-sector cell with a total of fourteen radios for traffic (as noted in Applicant's prior art, paragraph 0005). Fujii further teaches of a common control channel radio (column 5, lines 59 – 63 and column 3,lines 34 –37) that can be used in a three-sector cell (Figure 9) which controls connection to the system (as commonly known in the art and supported by the reference's background, column 1, lines 46 –50, control channels are required for system access; note that Ritter alludes to accessing the network, as per column 6, lines 29 –48). Thus, it is respectfully believed the combination of the cited collectively teach of Applicant's claimed structure, where the extra capacity is achieved (note all references teach of increased capacity, Ritter for example in column 6, lines 41 –46 and all references with their use of sectorizing of cells) in accordance with Applicant's claimed.

Hence, it is respectfully believed that the combination of the cited references, when combined for the motivation provided, teach or recite of the claimed as broadly interpreted.

Regarding claims 12 – 20, as no further comments in regards to the combination (Eriksson or Djuphammer) have been made, Applicant is reverently requested to see the above comments.

(please note the rejection presented for claims 1 – 20 is copied from the pervious Office Action, paper number 4)

Specification

3. The abstract of the disclosure is objected to because "RALLIB01: 596721 v1" appears at the bottom. Correction is required (please submit abstract on separate page as suggested per 37 CFR 1.52 section 6). See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter et al. (Ritter, US Patent No. 6,89,221) in view of Applicant's admitted prior art and Fujii et al. (Fujii, US Patent No. 5,551,060).

Regarding claim 1, Ritter teaches of an extra capacity radio base station for a wireless communication system (Figure 1), comprising: a first radio base station providing wireless communication to at least one sector of the wireless communication system (Figure 1), the first

group of radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65); and a second radio base station coupled to the first radio base station (starting column 2, line 63 and ending column 3, line 6), the second radio base station also providing wireless communication to the at least one sector (Figure 1), the second radio base station coupled to a second group of radios the second group of radios also transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (starting column 2, line 63 and ending column 3, line 6 and column 2, lines 53 –60 and column 4, lines 48 –65), wherein the first radio base station coupled to the second radio base station creates the extra capacity radio base station (starting column 2, line 63 and ending column 3, line 6 and starting column 8, lines 2 –6) and radios available for voice and data communication to the at least one sector of the wireless communication system (column 4, lines 52 –64).

Ritter does not specifically teach of the first radio base station coupled to a first group of n radios, where n is an integer, [and the extra capacity radio base station] utilizing an extra control radio to create 2n+1 [radios available for voice and data communication to the at least one sector of the wireless communication system] (note the brackets were added for clarity in language and it is believed these limitations have been addressed in the above cited references).

Applicant's prior art further teaches of the first radio base station coupled to a first group of n radios, where n is an integer (page2, paragraph 0005).

It would have been obvious to one skilled in the art at the time of invention to have included into Ritter's coupled base station system, Applicant's submitted cell and radio

configurations, for the purposes of accommodating common configurations of cell structures, as taught by Applicant.

Ritter in view of Applicant's admitted prior art do not specifically teach of [and the extra capacity radio base station] utilizing an extra control radio to create 2n+1 [radios available for voice and data communication to the at least one sector of the wireless communication system] (note the brackets were added for clarity in language and it is believed these limitations have been addressed in the above cited references).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein of [and the extra capacity radio base station] utilizing an extra control radio to create 2n+1 [radios available for voice and data communication to the at least one sector of the wireless communication system] (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

6. Claims 2 –6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060).

Regarding claim 2, Applicant's admitted prior art teaches of a 3x7 radio base station providing wireless communication to three sectors of the wireless communication system, the 3x7 radio base station coupled to a first group of seven radios per each sector of the three sectors (page 2, paragraph 0005);

Applicant's admitted prior art does not specifically teach of a second radio 3x7 base station coupled to the first 3x7 radio base station, the second 3x7 radio base station also providing wireless communication to the three sectors, the second radio base station coupled to a second group of radios per each sector of the three sectors, wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector.

In a related art dealing with the combination of base station networks, Ritter teaches of a second radio base station coupled to the first radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station also providing wireless communication to the three sectors (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to a second group of radios per each sector of the three sectors (Figure 1 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for the purposes of updating networks to accommodate newer technologies as well as potentially to accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15 radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

Regarding claim 3, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further teaches of wherein the 3x15 radio base station transmits and receives frequencies between 806-960 MHz (column 2,lines 53 –60).

Regarding claim 4, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further teaches of wherein the 3x15 radio base station transmits and receives frequencies between 1710-1855 MHz (column 2,lines 53 – 60).

Regarding claim 5, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further teaches of wherein the 3x15 radio base station transmits and receives frequencies between 2500-2690 MHz (starting column 4, line 66 and ending column 5, line 13).

Regarding claim 6, Applicant's admitted prior art, in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Ritter further discloses the use of various other

transmit and receive frequencies. However, Applicant's admitted prior art, in view of Ritter and Fuji, do not explicitly show using transmits and receives frequencies between 2.4 GHz-2.5 GHz.. The use of ISM band frequencies is a matter of system preference and is very well known in the art, thus the Examiner takes "Official Notice" as such. Therefore it would have been obvious to one skilled in the art, at the time of invention, to combine Applicant's admitted prior art, in view of Ritter and Fuji with the ISM band frequencies in order to accommodate newly available technologies (such as 802.11b or Bluetooth) created for use in the this consumer band.

Regarding claim 11, Applicant's admitted prior art teaches of a 3x7 radio base station providing wireless communication to three sectors of the wireless communication system, the 3x7 radio base station coupled to a first group of seven radios per each sector of the three sectors (page 2, paragraph 0005);

Applicant's admitted prior art does not specifically teach of a second radio 3x7 base station coupled to the first 3x7 radio base station, the second 3x7 radio base station also providing wireless communication to the three sectors, the second radio base station coupled to a second group of radios per each sector of the three sectors, wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector or of the first group of seven radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz; or of the second group of seven radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz.

In a related art dealing with the combination of base station networks, Ritter teaches of

a second radio base station coupled to the first radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station also providing wireless communication to the three sectors (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to a second group of radios per each sector of the three sectors (Figure 1 and column 4, lines 48 –65) and or of the first group of radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65); and of the second group of radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for the purposes of updating networks to accommodate newer technologies as well as potentially to accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15

radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060) as applied to claim 2 above, and further in view of Ketonen (Ketonen, US Patent No. 6,104,917).

Regarding claims 7 and 8, Applicant's admitted prior art in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Applicant's admitted prior art in view of Ritter and Fujii, do not specifically teach of wherein the first and second 3x7 radio base station comprises a cabinet to protect electronic equipment from environmental exposure.

In a related art dealing with control of environmental conditions for a BTS, Ketonen teaches of wherein the first and second 3x7 radio base stations comprises a cabinet to protect electronic equipment from environmental exposure (column 2,lines 38 –50 and column 3, lines 10 –23).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's admitted prior art in view of Ritter and Fujii's combined BTS structure, Ketonen's cabinent and control methods, for the purposes of operating electrical equipment housed within the cabinet, at an operating within tolerances, as taught by Ketonen.

8. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060) as applied to claim 2 above, and further in view of Djumphammer et al. (Djumphammer, US Patent No. 5,394,459).

Regarding claims 9 and 10, Applicant's admitted prior art in view of Ritter and Fujii, teach all the claimed limitations as recited in claim 2. Applicant's admitted prior art in view of Ritter and Fujii, do not specifically teach of wherein the first and second 3x7 radio base stations comprises a prefabricated structure.

In a related art dealing with BTS cabinets, Djumphammer teaches of wherein the first and second 3x7 radio base stations comprises a prefabricated structure (column 1, lines 45 –57 and column 2, lines 44 –64).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's admitted prior art in view of Ritter and Fujii's combined BTS structure, Djumphammer's cabinet structure, for the purposes of fault detection based on position, as taught by Djumphammer.

9. Claims 12 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060) and Eriksson et al. (Ericksson, US Patent No. 5,521,904).

Regarding claim 12, Applicant's admitted prior art teaches of a first 3x7 radio base station and a second 3x7 radio base station, the first 3x7 radio base station providing wireless communication to three sectors within the wireless communication system; and the first 3x7 radio base station comprising a first group of seven radios per sector (page 2, paragraph 0005),

Applicant's prior art does not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second group of seven radios per sector, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector.

In a related art dealing with the combination of base station networks, Ritter teaches of a second radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second group of radios per sector (Figure 1 and column 4, lines 48 –65) and the second radio base station comprising a second group of radios per sector (Figure 1 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for the purposes of updating networks to accommodate newer technologies as well as potentially to accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first

measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20).

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15 radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

Applicant's prior art in view of Ritter and Fujii do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler

unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals.

In related art dealing with BTS testing, Eriksson teaches of the first 3x7 radio base station comprising a first measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a first power splitter unit (Figure 4 and column 4, lines 1 –14), the first measuring coupler unit for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), and the first power splitter unit for distributing received signals (Figure 4 and column 4, lines 1 –14); and the second 3x7 radio base station comprising, a second measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a second power splitter unit (Figure 4 and column 4, lines 1 –14), the second measuring coupler unit also for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), the second power splitter unit also for distributing received signals (Figure 4 and column 4, lines 1 –14).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art, Ritter, and Fujii's combined BTS structure, Eriksson's additional components, for the purposes of a low cost test set that requires no additional processing equipment, as taught by Eriksson.

Regarding claim 13, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the first measuring coupler unit is coupled to the second power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 14, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the second measuring coupler unit is coupled to the first power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 15, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the first measuring coupler unit is coupled to the first power splitter unit and to the second power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 16, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the second measuring coupler unit is coupled to the second power splitter unit and to the first power splitter unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 17, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the first 3x7 radio base station further comprises a first radio frequency test: loop, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit (seen from Eriksson Figure 2 and column 3, lines 31 – 44, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 18, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. The combination of Applicant's prior art, Ritter, Fujii', and Eriksson further teach of wherein the second 30 radio base station further comprises a second radio frequency test loop, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit (seen from Eriksson Figure 2 and column 3, lines 31 – 44, when viewed with Applicant's prior art, Ritter, and Fujii).

Regarding claim 19, Applicant's prior art, Ritter, Fujii, and Eriksson, teach all the claimed limitations as recited in claim 12. Ritter further teaches of wherein the 3x15 radio base station transmits and receives frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 – 65).

Regarding claim 20, Applicant's admitted prior art teaches of a first 3x7 radio base station and a second 3x7 radio base station, the first 3x7 radio base station providing wireless communication to three sectors within the wireless communication system; and the first 3x7 radio base station comprising a first group of seven radios per sector (page 2, paragraph 0005),

Applicant's prior art does not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second group of seven radios per sector, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for

distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector or the first radio frequency test loop for calibration and test of the first 3x7 radio base station; the second radio frequency test loop for calibration and test of the second 3x7 radio base station; the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit; and the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit.

In a related art dealing with the combination of base station networks, Ritter teaches of a second radio base station (Figure 1 and column 4, lines 48 –65), the second radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second group of radios per sector (Figure 1 and column 4, lines 48 –65); the second radio base station comprising a second group of radios per sector (Figure 1 and column 4, lines 48 –65) and radio base station transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz (column 2, lines 53 –60 and column 4, lines 48 –65).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's first 3x7 base station, Ritter's second base station coupling system, for the purposes of updating networks to accommodate newer technologies as well as potentially to

accommodate higher capacity (as when operating in a hot spot or high traffic area) as taught by Ritter.

Applicant's prior art in view of Ritter do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals and wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector (though it should be noted that Ritter teaches of a controller for control unit, column 5, lines 53 –58 and column 11, line 17 –20) or the first radio frequency test loop for calibration and test of the first 3x7 radio base station; the second radio frequency test loop for calibration and test of the second 3x7 radio base station; the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit; and the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit.

In a related art dealing with the structure of cells in a mobile communication system, Fujii teaches of wherein the first radio 3x7 base station coupled to the second 3x7 radio base station creates the 3x15 radio base station (Figure 14B and column 5, lines 59 –63), the 3x15

radio base station providing the three sectors with fifteen radios per each sector (Figure 14B and column 5, lines 59 –63).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art and Ritter's combined BTS structure, Fujii's control channel transmitter, for the purposes of improved re-use partition of cells (via the use of an additional dedicated control transmitter), as taught by Fujii.

Applicant's prior art in view of Ritter and Fujii do not specifically teach of the first 3x7 radio base station comprising a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and the second 3x7 radio base station comprising, a second measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals or the first radio frequency test loop for calibration and test of the first 3x7 radio base station; the second radio frequency test loop for calibration and test of the second 3x7 radio base station; the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit; and the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit.

In related art dealing with BTS testing, Eriksson teaches of the first 3x7 radio base station comprising a first measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a first

power splitter unit (Figure 4 and column 4, lines 1 –14), the first measuring coupler unit for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), and the first power splitter unit for distributing received signals (Figure 4 and column 4, lines 1 –14); and the second 3x7 radio base station comprising, a second measuring coupler unit (Figure 2 and column 3, lines 44 –65), and a second power splitter unit (Figure 4 and column 4, lines 1 –14), the second measuring coupler unit also for amplifying and splitting received signals (Figure 2 and column 3, lines 44 –65), the second power splitter unit also for distributing received signals (Figure 4 and column 4, lines 1 –14); the first radio frequency test loop for calibration and test of the first 3x7 radio base station (Figure 2 and column 8, lines 3 – 11); the second radio frequency test loop for calibration and test of the second 3x7 radio base station (Figure 2 and column 8, lines 3 – 11); the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii); and the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit (seen from Eriksson Figure 2, when viewed with Applicant's prior art, Ritter, and Fujii).

It would have been obvious to one skilled in the art at the time of invention to have included into Applicant's prior art, Ritter, and Fujii's combined BTS structure, Eriksson's additional components, for the purposes of a low cost test set that requires no additional processing equipment, as taught by Eriksson.

10. Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter et al. (Ritter, US Patent No. 6,89,221) in view of Applicant's admitted prior art and Fujii et al. (Fujii, US Patent No. 5,551,060) or Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060)as applied to claims 1 or 2, above respectively, and further in view of Matsumoto et al. (Matsumoto, US Patent No. 5,898,683).

Regarding claims 21 and 24, Ritter in view of Applicant's admitted prior art and Fujii or Applicant's admitted prior art, in view of Ritter and Fujii teach all the claimed limitations as recited in claims 1 or 2, above respectively. Ritter in view of Applicant's admitted prior art and Fujii or Applicant's admitted prior art, in view of Ritter and Fujii do not specifically teach of said first radio base station is coupled to said second radio base station by cabling connecting said first radio base station to said second radio base station (though Ritter teaches of coupled radio base station in column 5, lines 39 –49).

In a related art dealing with base stations, Matsumoto teaches of said first radio base station is coupled to said second radio base station by cabling connecting said first radio base station to said second radio base station (Figure 5 and column 7, lines 43 –56).

It would have been obvious to one skilled in the art at the time of invention to have included into Ritter in view of Applicant's admitted prior art and Fujii or Applicant's admitted prior art, in view of Ritter and Fujii's combined base station system, Matsumoto's cabling, for the purposes of coupling several radio base stations together to form a base station group (thereby allowing more communications channels and capacity) as taught by Matsumoto.

11. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter et al. (Ritter, US Patent No. 6,89,221) in view of Applicant's admitted prior art and Fujii et al. (Fujii, US Patent No. 5,551,060) and Matsumoto et al. (Matsumoto, US Patent No. 5,898,683) or Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060) and Matsumoto et al. (Matsumoto, US Patent No. 5,898,683) as applied to claims 21 or 24, above respectively, and further in view of Csapo et al. (Csapo, US Patent No. 6,411,825) and Barringer (Barringer, US Patent No. 6,072,984).

Regarding claims 22 and 25, Ritter in view of Applicant's admitted prior art and Fujii and Matsumoto or Applicant's admitted prior art, in view of Ritter and Fujii and Matsumoto teach all the claimed limitations as recited in claims 21 or 25, above respectively. Ritter in view of Applicant's admitted prior art and Fujii and Matsumoto or Applicant's admitted prior art, in view of Ritter and Fujii and Matsumoto do not specifically teach of said first radio base station is housed in a first cabinet, said second radio base station is housed in a second cabinet, and a conduit between said first cabinet and said second cabinet contains said cabling (though it should be noted both Matsumoto and Ritter allude to such a concept as seen in Figures 5 and 1, respectively and further Matsumoto teaches of cabling between the radio base stations, as per Figure 5).

In a related art dealing with base station architecture, Cspao teaches of said first radio base station is housed in a first cabinet, said second radio base station is housed in a second cabinet (Figure 4 and column 2, lines 10 –15).

It would have been obvious to one skilled in the art at the time of invention to have included into Ritter in view of Applicant's admitted prior art and Fujii and Matsumoto's or

Applicant's admitted prior art, in view of Ritter and Fujii and Matsumoto's combined base station system, Csapo's housing, for the purposes of further protecting electronics from environmental conditions, as taught by Csapo.

Ritter in view of Applicant's admitted prior art, Fujii, Matsumoto, and Csapo or Applicant's admitted prior art, in view of Ritter, Fujii, Matsumoto, and Csapo do not specifically teach of and a conduit between said first cabinet and said second cabinet contains said cabling.

In a related art dealing with base stations, Barringer teaches of a conduit between said first cabinet and said second cabinet contains said cabling (Figure 3 and column 8, lines 34 –42).

It would have been obvious to one skilled in the art at the time of invention to have included into Ritter in view of Applicant's admitted prior art, Fujii, Matsumoto, and Csapo or Applicant's admitted prior art, in view of Ritter, Fujii, Matsumoto, and Csapo's combined base station structure, Barringer's conduit (which contains cabling), for the purposes of weather further protecting radio frequency components (including cables) as taught by Barringer.

12. Claims 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter et al. (Ritter, US Patent No. 6,89,221) in view of Applicant's admitted prior art and Fujii et al. (Fujii, US Patent No. 5,551,060) or Applicant's admitted prior art in view of Ritter et al. (Ritter, US Patent No. 6,89,221) and Fujii et al. (Fujii, US Patent No. 5,551,060)as applied to claims 1 or 2, above respectively, and further in view of Ketonen (Ketonen , US Patent No. 6,104,917).

Regarding claims 23 and 26, Ritter in view of Applicant's admitted prior art and Fujii or Applicant's admitted prior art, in view of Ritter and Fujii teach all the claimed limitations as recited in claims 1 or 2, above respectively. Ritter in view of Applicant's admitted prior art and Fujii or Applicant's admitted prior art, in view of Ritter and Fujii do not specifically teach of said

first 3x7 radio base station and said second radio bases station are housed within a common structure (though it should be noted that Ritter depicts such a structure in Figure 1).

In a related art dealing with control of environmental conditions for a BTS, Ketonen teaches of said first 3x7 radio base station and said second radio bases station are housed within a common structure (column 2,lines 38 –50 and column 3, lines 10 –23).

It would have been obvious to one skilled in the art at the time of invention to have included into Ritter in view of Applicant's admitted prior art and Fujii or Applicant's admitted prior art, in view of Ritter and Fujii's combined base station system, Ketonen's cabinent and control methods, for the purposes of operating electrical equipment housed within the cabinet, at an operating within tolerances, as taught by Ketonen.

Citation of Pertinent Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Inventor	Publication	Number	Disclosure
Herrig	US Patent	6,470,183	Apparatus and method for reducing the effects of intermodulation interference in a cellular radio system
Jeon et al.	US Patent	6,157,629	Base transceiver station of CDMA mobile communication system, has base control processor that periodically checks states of radio frequency card, analog common card and sector interface card
Ward et al.	US Patent	6,104,930	Floating transceiver assignment for cellular radio

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanmay S Lele whose telephone number is (703) 305-3462. The examiner can normally be reached on 9 - 6:30 PM Monday – Thursdays and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tanmay S Lele
Examiner
Art Unit 2684

tsl
August 5, 2004

NAY MAUNG
SUPERVISORY PATENT EXAMINER